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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,268	07/31/2003	Harriet Wall Hamilton	PC 25014A	3786

7590 09/01/2005

Heidi M. Berven
Warner-Lambert Company, LLC
2800 Plymouth Road
Ann Arbor, MI 48105

EXAMINER

SACKEY, EBENEZER O

ART UNIT	PAPER NUMBER
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1626

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/631,268

Applicant(s)

WALL HAMILTON ET AL.

Examiner

EBENEZER SACKY

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 30-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/24/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claims 1-50 are pending.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Information Disclosure Statement

Receipt of the Information Disclosure Statement filed 11/24/03 is acknowledged and has been entered into the file. A signed copy of the 1449 is attached herewith.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-29 are, drawn to sulfenylation of 2-carboxyindoles, classified in class 548, subclass 484.
- II. Claims 20-50 are, drawn to intramolecular sulfenylation of 2-carboxyindoles, classified in class 548, subclass 491.

The inventions are distinct, each from the other because of the following reasons:

Groups I and II are drawn to two distinct processes for sulfenylating 2-carboxyindoles as demonstrated by the different reactive conditions, reactants and product(s) made. Additionally, Groups I and II are independent and distinct because there is no patentable co-action among the various groups and a reference anticipating one member will not render another obvious.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Elsa Djuardi on 07/07/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-29. Affirmation of this election must be made by applicant in replying to this Office action. Claims 30-50 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

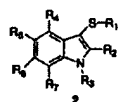
2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierr Hamel, Journal Of Organic Chemistry, 2002, 67, 2854-2858.

Applicants claim a one-step method for the sulfenylation of carboxyindoles comprising, mixing N-chlorosuccinimide and R_1SH to produce a mixture of R_1SCI (sulfonyl chloride) and combining an indole-2-carboxylate of formula (I) with the R_1SCI to prepare



The substituents on structural formulae (I) and (2) are as defined in claim 1 and subsequent claims.

Determination of the scope and content of the prior art (MPEP §2141.01)

Hamel discloses the sulfenylation of a similar carboxyindole comprising reacting sulfonylchloride and an indole. See the entire publication, especially page 2855 (scheme 1) and (scheme 2) on page 2855.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The instant process differs from Hamel in that N-chlorosuccinimide is first reacted with a thiol to generate a sulfonyl chloride which is then reacted with an indole-2-carboxylate of formula (I) to produce the 2-carboxyindoles of formula (2), whereas Hamel discloses the reaction of 2-methylindole and sulfonyl chloride to generate a similar 3-phenylthioindole. Thus, it can be inferred that the sulfonyl chloride employed by Hamel is similar to the one generated by the instant process prior to the formation of the 3-phenylthioindole. Additionally, Hamel discloses that sulfenylation is well-known and follows the usual

Art Unit: 1626

substitution pathway shown on page 2854, scheme 1 of the reference. Claim 8, requires the use of methylene chloride or chloroform or mixtures thereof. Claims 9-12 are drawn to different ratios of reactants and claims 13-15 are drawn to different reaction times. The reference is silent on the use of the compounds or mixtures thereof or the ratios and the reaction times. However, such a requirement is nothing more than the manipulation of process parameters in order to maximize yield and/or selectivity.

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

Thus, at the time of filing this application, one of ordinary skill in the art in possession of the Hamel reference would have found the instant claims obvious in view of the disclosure in Hamel. The requisite motivation being the desire to prepare 3-phenylthioindoles from indole derivatives and sulfenyl chloride, which as the reference discloses is well known. Thus, a slight difference in the starting material, ratios and reaction times may serve to differentiate the process from under 35 U.S.C 102 but, does not serve to remove the relied upon reference from under 35 U.S.C 103. Therefore, at the time of filing this application, one of ordinary skill in the art in possession of Hamel would have been in possession of the instant process absent a showing of unexpected results and/or properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Sackey whose telephone number is (571) 272-0704. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane, can be reached on (571) 272-0699. The fax phone

Application/Control Number: 10/631,268

Page 7


Art Unit: 1626

number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

EOS

August 30, 2005


for Joseph K. McKane
Supervisory Patent Examiner
Art Unit 1626, Group 1600
Technology Center 1